

00-140

REMARKS

Claims 1-20 are in the case, and claims 9-20 have been withdrawn from consideration. Claims 1-2, 4, and 7-8 are rejected under 35 USC § 102 over USPN 5,200,023 to Gifford et al. Claims 1-3, 5, and 7-8 are rejected under 35 USC § 102 over USPN 5,591,269 to Arami et al. Claims 1-3 and 5-8 are rejected under 35 USC § 103 over USPN 5,605,600 to Muller et al. in view of Arami et al. Claims 1-4 have been amended and claim 6 is hereby cancelled. No new matter has been introduced by the amendments, which are supported by the disclosure of the original claims and the specification. Reconsideration and allowance of the claims are requested.

CLAIM REJECTIONS UNDER §102

Claims 1-2, 4, and 7-8 are rejected under 35 U.S.C. 102 as being unpatentable over Gifford et al. Independent claim 1 claims, *inter alia*, a method for controlling the temperature of a substrate, by controlling the chuck temperature, sensing the chuck temperature from *a sensor in the chuck*, reporting the chuck temperature to a controller that is *operable to adjust the process energy, the media flow rate, and the media temperature*, and using the controller to bring the chuck temperature within the desired temperature range, by *first adjusting at least one of the media temperature and flow rate, and when adjusting both media temperature and the flow rate cannot bring the temperature within the desired range, then additionally adjusting the process energy*.

Gifford et al. do not describe such a method. Specifically, Gifford et al. do not sense the temperature of the chuck, rather, Gifford et al. directly sense the temperature of the wafer using thermography, and thus do not use sensors within the chuck at all. Further, Gifford et al. do not describe first adjusting the temperature and flow rate of the media that is used to cool the chuck in order to control the temperature of the wafer, and then only if that doesn't work to control the temperature by adjusting the process energy. Thus, the method described by Gifford et al. is different from the method as claimed in claim 1.

Therefore, claim 1 patentably defines over Gifford et al. Reconsideration and allowance of claim 1 are respectfully requested. Dependent claims 2, 4, and 7-8 depend

00-140

from independent claim 1, and contain additional important aspects of the invention. Therefore, dependent claims 2, 4, and 7-8 patentably define over Gifford et al. Reconsideration and allowance of dependent claims 2, 4, and 7-8 are respectfully requested.

Claims 1-3, 5, and 7-8 are rejected under 35 U.S.C. 102 as being unpatentable over Arami et al. Independent claim 1 claims, *inter alia*, a method for controlling the temperature of a substrate, by controlling the chuck temperature, sensing the chuck temperature from *a sensor in the chuck*, reporting the chuck temperature to a controller that is *operable to adjust the process energy, the media flow rate, and the media temperature*, and using the controller to bring the chuck temperature within the desired temperature range, by *first adjusting at least one of the media temperature and flow rate, and when adjusting both media temperature and the flow rate cannot bring the temperature within the desired range, then additionally adjusting the process energy*.

Arami et al. do not describe such a method. Specifically, Arami et al. do not adjust the temperature of the chuck coolant to adjust the temperature of the chuck, neither do Arami et al. adjust the process power to adjust the temperature of the chuck. It is noted that the references to adjusting power in Arami et al. are in regard to the power supplied to the heater blocks, and not the processing power. Further, Arami et al. do not describe first adjusting the temperature and flow rate of the media that is used to cool the chuck in order to control the temperature of the wafer, and then only if that doesn't work to control the temperature by adjusting the process energy. Thus, the method described by Arami et al. is different from the method as claimed in claim 1.

Therefore, claim 1 patentably defines over Arami et al. Reconsideration and allowance of claim 1 are respectfully requested. Dependent claims 2-3, 5, and 7-8 depend from independent claim 1, and contain additional important aspects of the invention. Therefore, dependent claims 2-3, 5, and 7-8 patentably define over Arami et al. Reconsideration and allowance of dependent claims 2-3, 5, and 7-8 are respectfully requested.

00-140

CLAIM REJECTIONS UNDER §103

Claims 1-3 and 5-8 are rejected under 35 U.S.C. 103 as being unpatentable over Muller et al. in view of Arami et al. Independent claim 1 claims, *inter alia*, a method for controlling the temperature of a substrate, by controlling the chuck temperature, sensing the chuck temperature from *a sensor in the chuck*, reporting the chuck temperature to a controller that is *operable to adjust the process energy, the media flow rate, and the media temperature*, and using the controller to bring the chuck temperature within the desired temperature range, by *first adjusting at least one of the media temperature and flow rate, and when adjusting both media temperature and the flow rate cannot bring the temperature within the desired range, then additionally adjusting the process energy*.

Muller et al. do not describe such a method. Specifically, Muller et al. do not adjust the flow rate of the chuck coolant to adjust the temperature of the chuck. Further, Muller et al. do not describe first adjusting the temperature and flow rate of the media that is used to cool the chuck in order to control the temperature of the wafer, and then only if that doesn't work to control the temperature by adjusting the process energy. It is specifically noted that Muller et al. have no description whatsoever of combining any of the temperature control methods. Even in the claims, Muller et al. do not describe combining the temperature control methods in any way. Thus, Muller et al. do not describe any combination of temperature control methods, let alone the novel combination and order of temperature control methods as described in claim 1. For this reason, any argument as to the order of use of the temperature control methods being obvious is moot, because Muller et al. do not even use an order of temperature control methods. Instead, Muller et al. describe the separate and isolated use of alternate temperature control methods. Therefore, the method described by Muller et al. is different from the method as claimed in claim 1.

Arami et al. do not remedy the deficiencies of Muller et al. Specifically, Arami et al. do not adjust the temperature of the chuck coolant to adjust the temperature of the chuck, neither do Arami et al. adjust the process power to adjust the temperature of the chuck. Again, the references to adjusting power in Arami et al. are in regard to the power supplied to the heater blocks, and not the processing power. Further, Arami et al. do not

00-140

describe first adjusting the temperature and flow rate of the media that is used to cool the chuck in order to control the temperature of the wafer, and then only if that doesn't work to control the temperature by adjusting the process energy. Thus, the method described by Arami et al. is different from the method as claimed in claim 1.

Therefore, the combination of Muller et al. and Arami et al. do not describe the method as claimed in claim 1, and claim 1 patentably defines over Muller et al. in view of Arami et al. Reconsideration and allowance of claim 1 are respectfully requested. Dependent claim 6 has been cancelled, and the limitations which it contained have been added to independent claim 1. Dependent claims 2-3, 5, and 7-8 depend from independent claim 1, and contain additional important aspects of the invention. Therefore, dependent claims 2-3, 5, and 7-8 patentably define over Muller et al. in view of Arami et al. Reconsideration and allowance of dependent claims 2-3, 5, and 7-8 are respectfully requested.

COMBINATION OF REFERENCES

Furthermore, it is respectfully submitted that the references cited do not support combining the elements as claimed in the present invention. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d (BNA) 1566 (Fed. Cir. 1990) states that the PTO erred in rejecting a claimed invention as an obvious combination of the teaching of prior art references when the prior art provided no teaching, suggestion, or incentive supporting the combination. See *Northern Telecom Inc. v. Datapoint Corp.*, 15 U.S.P.Q.2d 1321, 1323, *In re Geiger*, 2 U.S.P.Q.2D 1276, 1278. *SmithKline Diagnostics, Inc. v. Helena Laboratories Corp.*, 859 F.2d 878, 887, 8 U.S.P.Q.2d (BNA) 1468, 1475 (Fed. Cir. 1988) states that one "cannot pick and choose among the individual elements of assorted prior art references to recreate the claimed invention."

There is nothing in the prior art cited to lead a person of ordinary skill to design an apparatus like that of the present invention, other than the hindsight knowledge of this invention. The office action recites certain generalized benefits (realized in hindsight after considering the invention) as motivation for the combination of the references. However, these generalized motivations do not make obvious the combination of the references to produce the claimed invention. Only after considering the invention is it

00-140

understood that combining the references (and adding a great deal more) tends to produce the motivating elements.

This, however, does not satisfy Section 103. The motivation to combine references cannot come from the invention itself. *See In re Oetiker*, 24 U.S.P.Q.2D 1443, 1446. The claims of the present application appear to have been used as a frame, and individual parts of separate prior art references were employed to recreate a facsimile of the claimed invention. *See W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 220 U.S.P.Q. 303, 312. There is no explanation of what there was in the prior art that would have caused those skilled in the art to combine the references.

The examiner has the burden to show some teaching or suggestion in the references to support their use in the particular claimed combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 5 U.S.P.Q.2D at 1438-1439. In the absence of such, applicants respectfully suggest that the references are improperly combined.

CONCLUSION

Applicants assert that the claims of the present application patentably define over the prior art made of record and not relied upon for the same reasons as given above. Applicants respectfully submit that a full and complete response to the office action is provided herein, and that the application is now fully in condition for allowance. Action in accordance therewith is respectfully requested.

In the event this response is not timely filed, applicants hereby petition for the appropriate extension of time and request that the fee for the extension be charged to deposit account 12-2355. If other fees are required by this amendment, such as fees for additional claims, such fees may be charged to deposit account 12-2252. Should the examiner require further clarification of the invention, it is requested that he contact the undersigned before issuing the next office action.

Sincerely,

LUEDEKA, NEELY & GRAHAM, P.C.

By: 

Rick Barnes, 39,596